

NTSB Recommendation A-84-076

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Rec #: A-84-076

NTSB Status: Closed - Unacceptable Action

Issue date: 7/12/1984

Accident Date: 6/2/1983

Source Event: ACCIDENT

Location: CINCINNATI Ohio

Mode: AVIATION

Most Wanted List: No

Closed date: 5/12/1986

Report Number: AAR-84-09

Accident ID: DCA83AA028

Background Synopsis:

THE NATIONAL TRANSPORTATION SAFETY BOARD HAS COMPLETED ITS INVESTIGATION OF THE ACCIDENT INVOLVING AIR CANADA FLIGHT 797, WHICH OCCURRED ON JUNE 2, 1983, WHEN AN IN-FLIGHT FIRE FORCED THE FLIGHTCREW OF THE MCDONNELL DOUGLAS DC-9 AIRPLANE TO MAKE AN EMERGENCY LANDING AT THE GREATER CINCINNATI AIRPORT. UPON LANDING, A FLASH FIRE OCCURRED IN THE CABIN. THE FIVE CREWMEMBERS AND 18 PASSENGERS WERE ABLE TO EVACUATE THE BURNING CABIN; THE REMAINING 23 PASSENGERS DIED IN THE FIRE. THE SAFETY BOARD'S INVESTIGATION HAS DETERMINED THAT THE FIRE PROPAGATED THROUGH THE AIRPLANE'S LEFT REAR LAVATORY, BUT WAS UNABLE TO IDENTIFY POSITIVELY THE SOURCE OF IGNITION. THE SAFETY BOARD WAS NOT ABLE TO DETERMINE THE EXTENT TO WHICH THE FLIGHTCREW'S DELAY IN INITIATING AN EMERGENCY DESCENT FOR LANDING CONTRIBUTED TO THE ACCIDENT AT STANDIFORD FIELD, LOUISVILLE, KENTUCKY, ABOUT 3 TO 5 MINUTES SOONER THAN THE LANDING AT CINCINNATI. THE SHORTENED EXPOSURE TIME OF THE PASSENGERS TO THE TOXIC ENVIRONMENT IN THE CABIN WOULD UNDOUBTEDLY HAVE MEANT LESS DEGRADATION OF THEIR PHYSICAL AND MENTAL CAPACITY AND WOULD HAVE ENHANCED THEIR CHANCES OF SUCCESSFULLY LEAVING THE CABIN BEFORE IT WAS CONSUMED BY FIRE.

Recommendation:

THE NTSB RECOMMENDS THAT THE FEDERAL AVIATION ADMINISTRATION: REQUIRE THAT AIR CARRIER PRINCIPAL OPERATIONS INSPECTORS REVIEW THE TRAINING PROGRAMS OF THEIR RESPECTIVE CARRIERS AND IF NECESSARY SPECIFY THAT THEY BE AMENDED TO EMPHASIZE REQUIREMENTS: - FOR FLIGHTCREWS TO TAKE IMMEDIATE AND AGGRESSIVE ACTION TO DETERMINE THE SOURCE AND SEVERITY OF ANY REPORTED CABIN FIRE AND TO BEGIN AN EMERGENCY DESCENT FOR LANDING OR DITCHING IF THE SOURCE AND SEVERITY OF THE FIRE ARE NOT POSITIVELY AND QUICKLY DETERMINED OR IF IMMEDIATE EXTINCTION IS NOT ASSURED. - FOR FLIGHT ATTENDANTS TO RECOGNIZE THE URGENCY OF INFORMING FLIGHTCREWS OF THE LOCATION, SOURCE, AND SEVERITY OF ANY FIRE OR SMOKE WITHIN THE CABIN. - FOR BOTH FLIGHTCREWS AND FLIGHT ATTENDANTS TO BE KNOWLEDGABLE OF THE PROPER METHODS OF AGGRESSIVELY ATTACKING A CABIN FIRE BY INCLUDING HANDS-ON-TRAINING IN THE DONNING OF PROTECTIVE BREATHING EQUIPMENT, THE USE OF THE FIRE AX TO GAIN ACCESS TO THE SOURCE OF THE FIRE THROUGH INTERIOR PANELS WHICH CAN BE PENETRATED WITHOUT RISK TO ESSENTIAL

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AIRCRAFT COMPONENTS, AND THE DISCHARGE OF AN APPROPRIATE HAND FIRE EXTINGUISHER ON AN ACTUAL FIRE.

Correspondence:

Response Date: 11/2/1984 From: Addressee

Response:

FAA LETTER: WE BELIEVE THE SAFETY RECORD OF U.S. AIR CARRIERS IS A TESTIMONY TO THE ADEQUACY OF CURRENT REGULATIONS. BY REVIEWING THE PRESENT RULES AND EMPHASIS ON THIS SUBJECT AND DETERMINING THAT THEY ARE ADEQUATE, WE BELIEVE WE ARE FULFILLING THE INTENT OF THIS RECOMMENDATION. IT IS OUR OPINION THAT TO USE A FIRE AX TO GAIN ACCESS TO THE SOURCE OF SMOKE OR FIRE THROUGH INTERIOR PANELS OF THE AIRCRAFT IS POTENTIALLY MORE DANGEROUS THAN EXISTING PROCEDURES.

Response Date: 4/12/1985 From: NTSB

Response:

The thrust of this Safety Recommendation was not to require modifications to 14 CFR 121.417, as implied in your letter, but rather for action to ensure that air carrier fire training programs comply with the current regulations and that flight cabin and cockpit crews are prepared to assess and communicate correctly the nature of the hazard as well as to aggressively fight an in-flight fire. A thorough review of the air carriers' training programs by the Principal Operations Inspectors (POI) would determine the adequacy of a given operator's formal training program and identify specific areas that may need to be improved in light of the Air Canada Flight 797 accident. We believe that the reaction of the Air Canada crew probably is typical of what many air carrier crews would have done and therefore that efforts should be made to improve all air carrier crew firefighting training programs. The Safety Board notes that 14 CFR 121.417 allows considerable leeway in the training of crewmembers which makes close surveillance by POIs essential. One could surmise from the regulations that a crew person who has donned protective breathing equipment (PBE) and operated a fire extinguisher is fully trained. We could not agree. Current firefighting training is directed primarily toward "exposed" fires which are relatively easy to control. This does not prepare crews to assess effectively the hazard of or to fight hidden fires. Therefore, it is imperative that POIs review training programs to ensure they address the best possible responses to in-flight fires. The Safety Board continues to believe that flightcrews should be better prepared to determine the source and severity of a fire and to take aggressive action to ensure that it is extinguished. Further, it is the Safety Board's belief that the best place to fight an aircraft fire is on the ground. Therefore, aircraft crew training programs should emphasize that if the source of a fire is not immediately identified or if a fire cannot be extinguished immediately with the equipment onboard, the aircraft should be landed. The Safety Board is concerned that the economic aspects of a nonscheduled landing may adversely affect the crew's judgment and lead them to persist in fighting an uncontrollable fire rather than land. If aircraft crews are trained properly in firefighting techniques for various types of aircraft fires, they will be better able to determine which fires require an immediate landing of the aircraft. Therefore, although your letter indicates a belief that the FAA has met the intent of this Safety Recommendation, we ask that the FAA reconsider taking action to direct Air Carrier Principal Operations

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Inspectors to review air carrier training programs and to emphasize the need for adequate firefighting training. Pending receipt of the results of this evaluation, Safety Recommendation A-84-76 has been classified as "Open--Unacceptable Action."

Response Date: 3/7/1986 From: Addressee

Response:

DUE TO REQUIREMENTS OF 14 CFR 121.417, THE VARIOUS ACOB'S, AND THE GUIDANCE REFLECTED IN THE INSPECTOR'S HANDBOOK, I BELIEVE THAT FURTHER ACTION BY THE FAA IS UNWARRANTED.

Response Date: 5/12/1986 From: NTSB

Response:

As noted in the Safety Board's letter of April 12, 1985, the trust of this recommendation was to ensure that air carrier fire training programs comply with the current regulations and that cabin and cockpit crews are prepared to assess and communicate correctly the nature of the hazard as well as to aggressively fight and in-flight fire. An appropriate response to this recommendation would have been a thorough review of the air carrier's training programs by the Principal Operations Inspectors (POI) to determine the adequacy of a given operator's formal training Data Source: NTSB Recommendations to FAA and FAA Responses program and identify specific areas that may need to be improved in light of the events noted in the Air Canada Flight 797 accident. The Safety Board continues to believe that the reactions of the Air Canada crew were typical of what would be expected on a U.S. registered airliner given current POI inspection practices. Therefore, a thorough review of the fire fighting training procedures is needed. Additionally, the Safety Board believes that Air Carrier Operations Bulletins are essentially one-time events that have a limited viewing and are not necessarily reviewed by new air carriers or new POIs. Therefore, bulletins that were issued 10 years ago would not meet the intent of this recommendation. Since the FAA has not taken the recommended action, Safety Recommendation A-84-76 has been classified as "Closed--Unacceptable Action." Although we have closed this recommendation, our concern for the safety issue involved has not diminished and we will continue to voice our concern in future accident investigations.